

**Sub-Element 6.a— Monitoring and Decontamination of Evacuees and Emergency Workers and Registration of Evacuees**

<b>What the Policy Says</b>	<p><b>Intent</b> NUREG-0654 provides that OROs should have the capability to implement radiological monitoring and decontamination of evacuees and emergency workers, while minimizing contamination of the facility, and registration of evacuees at reception centers.</p> <p><b>Criterion 6.a.1:</b> The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h; J.12; K.5.a).</p> <p><b>Minimum Frequency</b> Criterion 6.a.1 is to be evaluated once in 6 years. The plume phase and the post-plume phase can be demonstrated separately.</p> <p><b>Extent of Play</b> Radiological monitoring, decontamination, and registration facilities for evacuees/emergency workers should be set up and demonstrated as they would be in an actual emergency or as indicated in the extent of play agreement. This would include adequate space for evacuees' vehicles. Expected demonstration should include \1/3\ of the monitoring teams/portal monitors required to monitor 20% of the population allocated to the facility within 12 hours. Before using monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation.</p> <p>Staff responsible for the radiological monitoring of evacuees should demonstrate the capability to attain and sustain a monitoring productivity rate per hour needed to monitor the 20% emergency planning zone (EPZ) population planning base within about 12 hours. This monitoring productivity rate per hour is the number of evacuees that can be monitored per hour by the total complement of monitors using an appropriate monitoring procedure. A minimum of six individuals per monitoring station should be monitored, using equipment and procedures specified in the plan and/or procedures, to allow demonstration of monitoring, decontamination, and registration capabilities. The monitoring sequences for the first six simulated evacuees per monitoring team will be timed by the evaluators in order to determine whether the twelve-hour requirement can be met. Monitoring of emergency workers does not have to meet the twelve-hour requirement. However, appropriate monitoring procedures should be demonstrated for a minimum of two emergency workers.</p>
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	<p>Decontamination of evacuees/emergency workers may be simulated and conducted by interview. The availability of provisions for separately showering should be demonstrated or explained. The staff should demonstrate provisions for limiting the spread of contamination. Provisions could include floor coverings, signs and appropriate means (for example, partitions, roped-off areas) to separate clean from potentially contaminated areas. Provisions should also exist to separate contaminated and uncontaminated individuals, provide changes of clothing for individuals whose clothing is contaminated, and store contaminated clothing and personal belongings to prevent further contamination of evacuees or facilities. In addition, for any individual found to be contaminated, procedures should be discussed concerning the handling of potential contamination of vehicles and personal belongings.</p> <p>Monitoring personnel should explain the use of action levels for determining the need for decontamination. They should also explain the procedures for referring evacuees who cannot be adequately decontaminated for assessment and follow up in accordance with the ORO's plans and procedures. Contamination of the individual will be determined by controller inject and not simulated with any low-level radiation source.</p> <p>The capability to register individuals upon completion of the monitoring and decontamination activities should be demonstrated. The registration activities demonstrated should include the establishment of a registration record for each individual, consisting of the individual's name, address, results of monitoring, and time of decontamination, if any, or as otherwise designated in the plan. Audio recorders, camcorders, or written records are all acceptable means for registration.</p> <p>All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless otherwise indicated in the extent of play agreement.</p>
<p><b>Preparing to Evaluate This Criterion</b></p>	<p>Before the exercise, determine, according to the ORO's plan/procedures and the Extent of Play agreement:</p> <p><b>For Evacuees (General Public)</b></p> <ul style="list-style-type: none"> <li>• Where will monitoring, decontamination, and registration of evacuees occur?</li> <li>• What kind of monitoring equipment will be used? Hand held? Portal monitors?</li> <li>• How many personnel are trained to operate monitoring equipment?</li> <li>• Is there team or group dosimetry, or strategically placed radiological monitoring instruments, for contamination control at the facility?</li> <li>• What is the total population of the EPZ? What is 20% of that figure (the estimate of needed monitoring capability)?</li> <li>• Is there sufficient staff and monitoring equipment specified to process 20% of population (assigned to the facility to be evaluated) within 12 hours?</li> <li>• Will all required monitoring staff be demonstrated? If not, what is the agreed demonstration?</li> </ul>

<b>Preparing to Evaluate This Criterion (Continued)</b>	<ul style="list-style-type: none"> <li>• Will at least 6 individuals be monitored per monitoring station?</li> <li>• What is the action level for determining the need for decontamination?</li> <li>• When an individual is found to be contaminated, what happens to their potentially contaminated vehicle?</li> <li>• What procedures are used to minimize contamination within the facility?</li> <li>• How are contaminated individuals separated from non-contaminated individuals?</li> <li>• How are monitored and clean vehicles separated from contaminated or non-monitored vehicles?</li> <li>• How are contaminated clothing and other personal belongings to be handled? Will clean clothing be provided to evacuees?</li> <li>• Are separate showers for males and females specified?</li> <li>• What procedures are used if evacuees could not be adequately decontaminated?</li> <li>• Will decontamination of evacuees be conducted by interview or actually demonstrated?</li> <li>• What is the process used to ensure that only clean evacuees enter the registration area?</li> <li>• What organization registers evacuees upon completion of monitoring and decontamination?</li> </ul> <p><b>For Emergency Workers</b></p> <ul style="list-style-type: none"> <li>• Where will monitoring, decontamination, and registration of emergency workers occur?</li> <li>• What kind of monitoring equipment will be used?</li> <li>• How many personnel are trained to operate monitoring equipment at the facility for emergency workers?</li> <li>• What is the action level for determining the need for decontamination?</li> <li>• What procedures are used to minimize contamination within the facility?</li> <li>• How are contaminated emergency workers separated from non-contaminated emergency workers?</li> <li>• How are contaminated clothing and other personal belongings to be handled? Will clean clothing be provided to emergency workers?</li> <li>• Will decontamination of emergency workers be conducted by interview or actually demonstrated?</li> <li>• Are separate showers for male and female emergency workers specified?</li> <li>• What procedures are used if emergency workers could not be adequately decontaminated?</li> </ul>
<b>During the Exercise</b>	<p>During the exercise, in addition to evaluating activities related to the items listed above, be sure to:</p> <p><b>For Evacuees (General Public)</b></p> <ul style="list-style-type: none"> <li>• Note whether there was adequate space for evacuees and their vehicles at the reception center.</li> <li>• Document the type and quantity of monitoring equipment used.</li> <li>• Note how monitoring equipment is checked to ensure it is operational.</li> <li>• Document the number of personnel available to perform monitoring of vehicles and evacuees (compare to the number indicated in the extent of play agreement).</li> <li>• Document the number of personnel available to perform decontamination of evacuees (compare to the number indicated in the extent of play agreement).</li> </ul>

<b>During the Exercise (Continued)</b>	<ul style="list-style-type: none"><li>• Determine whether, based on the demonstration, the facility can monitor 20% of anticipated evacuees within 12 hours.</li><li>• Note if contamination control procedures, including storage of contaminated clothing and possessions, were followed.</li><li>• Note whether there are separate showers for males and females.</li><li>• Observe what is done if an evacuee cannot be successfully decontaminated.</li><li>• Note if the access into the clean (registration) area is controlled adequately.</li><li>• Note if a registration record was established for each individual. The record (which can be written or recorded audiovisually) should contain the individual's name, address, results of monitoring, and time of decontamination (if needed).</li></ul> <p><b>For Emergency Workers</b></p> <ul style="list-style-type: none"><li>• Note whether there was adequate space for emergency workers at the emergency worker decontamination facility.</li><li>• Document the type and quantity of monitoring equipment used.</li><li>• Note how monitoring equipment is checked to ensure it is operational.</li><li>• Note whether there are separate showers for male and female emergency workers.</li><li>• Note whether at least two emergency workers were monitored.</li><li>• Document the number of personnel available to perform monitoring of emergency workers (compare to the number indicated in the extent of play agreement).</li><li>• Document the number of personnel available to perform decontamination of emergency workers (compare to the number indicated in the extent of play agreement).</li><li>• Note if contamination control procedures, including storage of contaminated clothing and possessions, were followed.</li><li>• Observe what is done if an emergency worker cannot be successfully decontaminated.</li><li>• Note if a record of monitoring and decontamination (if necessary) is kept for each emergency worker.</li></ul>
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### Sub-Element 6.b— Monitoring and Decontamination of Emergency Worker Equipment

<p><b>What the Policy Says</b></p>	<p><b>Intent</b> NUREG-0654 provides that OROs should have the capability to implement radiological monitoring and decontamination of emergency worker equipment, including vehicles.</p> <p><b>Criterion 6.b.1:</b> The facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment, including vehicles. (NUREG-0654, K.5.b).</p> <p><b>Minimum Frequency</b> Criterion 6.b.1 is to be evaluated once in 6 years. The plume phase and the post-plume phase can be demonstrated separately.</p> <p><b>Extent of Play</b> The monitoring staff should demonstrate the capability to monitor equipment, including vehicles, for contamination in accordance with the Offsite Response Organizations (ORO) plans and procedures. Specific attention should be given to equipment, including vehicles, that was in contact with individuals found to be contaminated. The monitoring staff should demonstrate the capability to make decisions on the need for decontamination of equipment, including vehicles, based on guidance levels and procedures stated in the plan and/or procedures.</p> <p>The area to be used for monitoring and decontamination should be set up as it would be in an actual emergency, with all route markings, instrumentation, record keeping and contamination control measures in place. Monitoring procedures should be demonstrated for a minimum of one vehicle. It is generally not necessary to monitor the entire surface of vehicles. However, the capability to monitor areas such as radiator grills, bumpers, wheel wells, tires, and door handles should be demonstrated. Interior surfaces of vehicles that were in contact with individuals found to be contaminated should also be checked.</p> <p>Decontamination capabilities, and provisions for vehicles and equipment that cannot be decontaminated, may be simulated and conducted by interview.</p> <p>All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.</p>
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<b>Preparing to Evaluate This Criterion</b>	<p>Before the exercise, determine, according to the ORO's plan/procedures and the Extent of Play agreement:</p> <ul style="list-style-type: none"><li>• Where will emergency workers' equipment be monitored and decontaminated?</li><li>• What instruments (manufacturer/model number/earphones/speaker) are used to monitor potentially contaminated vehicles/equipment?</li><li>• How are monitoring instruments operationally checked?</li><li>• What is the action level to determine if vehicle/equipment requires decontamination?</li><li>• What process is used to decontaminate vehicles and equipment?</li><li>• Will decontamination procedures be conducted through interview or actually demonstrated?</li></ul>
<b>During the Exercise</b>	<p>During the exercise, in addition to evaluating activities related to the items listed above, be sure to:</p> <ul style="list-style-type: none"><li>• Note whether there was adequate space for emergency worker equipment and their vehicles at the facility.</li><li>• Document the number of personnel available to perform monitoring of emergency worker vehicles (compare to the number indicated in the extent of play agreement).</li><li>• Describe the set-up at the facility, which should be as it would be in an actual emergency, including route markings, instrumentation, record keeping and contamination control measures.</li><li>• Document the type and quantity of monitoring equipment used.</li><li>• Note how monitoring equipment is checked to ensure it is operational.</li><li>• Observe monitoring of at least one vehicle, including air intake systems, radiator grills, bumpers, wheel wells, tires, and door handles.</li><li>• Document the number of personnel available to perform monitoring of emergency worker equipment (compare to the number indicated in the extent of play agreement).</li></ul>

### Sub-Element 6.c— Temporary Care of Evacuees

<p><b>What the Policy Says</b></p>	<p><b>Intent</b> NUREG-0654 provides that OROs demonstrate the capability to establish relocation centers in host areas. The American Red Cross (ARC) normally provides congregate care in support of OROs under existing letters of agreement.</p> <p><b>Criterion 6.c.1:</b> Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines. (Found in MASS CARE--Preparedness Operations, ARC 3031). Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate before entering congregate care facilities. (NUREG-0654, J.10.h, J.12).</p> <p><b>Minimum Frequency</b> Criterion 6.c.1 is to be evaluated once in 6 years. Facilities managed by the American Red Cross (ARC), under the ARC/FEMA MOU, will be evaluated once when designated or when substantial changes occur; all other facilities not managed by the ARC must be evaluated once in the 6-year exercise cycle.</p> <p><b>Extent of Play</b> Under this criterion, demonstration of congregate care centers may be conducted out of sequence with the exercise scenario. The evaluator should conduct a walk-through of the center to determine, through observation and inquiries, that the services and accommodations are consistent with ARC 3031. In this simulation, it is not necessary to set up operations as they would be in an actual emergency. Alternatively, capabilities may be demonstrated by setting up stations for various services and providing those services to simulated evacuees. Given the substantial differences between demonstration and simulation of this objective, exercise demonstration expectations should be clearly specified in extent-of-play agreements.</p> <p>Congregate care staff should also demonstrate the capability to ensure that evacuees have been monitored for contamination, have been decontaminated as appropriate, and have been registered before entering the facility. This capability may be determined through an interview process.</p> <p>If operations at the center are demonstrated, material that would be difficult or expensive to transport (for example, cots, blankets, sundries, and large-scale food supplies) need not be physically available at the facility (facilities). However, availability of such items should be verified by providing the evaluator a list of sources with locations and estimates of quantities.</p> <p>All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.</p>
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<b>Preparing to Evaluate This Criterion</b>	<p>Before the exercise, determine, according to the ORO's plan/procedures and the Extent of Play agreement:</p> <ul style="list-style-type: none"><li>• What agency is responsible for managing the congregate care center?</li><li>• How will the congregate care center be set up for the demonstration?</li><li>• How will personnel at the congregate care center ensure that evacuees entering the facility have been monitored and found to be clean of contamination?</li></ul>
<b>During the Exercise</b>	<p>During the exercise, in addition to evaluating activities related to the items listed above, be sure to:</p> <ul style="list-style-type: none"><li>• Note whether the congregate care center is set up in accordance with the extent of play agreement. If equipment (cots, blankets, sundries, food supplies) has not been brought in for the demonstration, the center staff should have a list of sources of equipment with locations and estimates of quantities.</li><li>• Document available resources for evacuees (real or simulated) arriving at the congregate care center.</li><li>• Document how the American Red Cross Guidelines on mass care will be met at this facility.</li><li>• Note whether congregate care staff check to see if evacuees have been monitored and, if necessary, decontaminated.</li></ul>



### Sub-Element 6.d— Transportation and Treatment of Contaminated Individuals

<p><b>What the Policy Says</b></p>	<p><b>Intent</b> NUREG-0654 provides that OROs should have the capability to transport contaminated injured individuals to medical facilities with the capability to provide medical services.</p> <p><b>Criterion 6.d.1:</b> The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2; H.10; K.5.a, b; L.1, 4).</p> <p><b>Minimum Frequency</b> Criterion 6.d.1 is to be evaluated every exercise.</p> <p><b>Extent of Play</b> Monitoring, decontamination, and contamination control efforts will not delay urgent medical care for the victim.</p> <p>Offsite Response Organizations (ORO) should demonstrate the capability to transport contaminated injured individuals to medical facilities. An ambulance should be used for the response to the victim. However, to avoid taking an ambulance out of service for an extended time, any vehicle (for example, car, truck, or van) may be used to transport the victim to the medical facility. Normal communications between the ambulance/dispatcher and the receiving medical facility should be demonstrated. If a substitute vehicle is used for transport to the medical facility, this communication must occur before releasing the ambulance from the drill. This communication would include reporting radiation monitoring results, if available. Additionally, the ambulance crew should demonstrate, by interview, knowledge of where the ambulance and crew would be monitored and decontaminated, if required, or whom to contact for such information.</p> <p>Monitoring of the victim may be performed before transport, done en route, or deferred to the medical facility. Before using a monitoring instrument(s), the monitor(s) should demonstrate the process of checking the instrument(s) for proper operation. All monitoring activities should be completed as they would be in an actual emergency. Appropriate contamination control measures should be demonstrated before and during transport and at the receiving medical facility.</p> <p>The medical facility should demonstrate the capability to activate and set up a radiological emergency area for treatment. Equipment and supplies should be available for the treatment of contaminated injured individuals.</p>
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	<p>The medical facility should demonstrate the capability to make decisions on the need for decontamination of the individual, to follow appropriate decontamination procedures, and to maintain records of all survey measurements and samples taken. All procedures for the collection and analysis of samples and the decontamination of the individual should be demonstrated or described to the evaluator.</p> <p>All activities associated with this criterion must be based on the ORO's plans and procedures and completed as they would be in an actual emergency, unless noted above or otherwise indicated in the extent of play agreement.</p>
<b>Preparing to Evaluate This Criterion</b>	<p>Before the exercise, determine, according to the ORO's plan/procedures and the Extent of Play agreement:</p> <ul style="list-style-type: none"> <li>• What organization will demonstrate the capability to transport contaminated, injured individuals to the appropriate medical facilities?</li> <li>• How is the hospital notified to establish a Radiological Emergency Area (REA)?</li> <li>• What equipment and supplies are available in the REA?</li> <li>• What information will be provided to the medical facility by the ambulance crew?</li> <li>• Are procedures in place to ensure that when the (simulated) contaminated, injured evacuee arrives, urgent medical care takes precedence over monitoring, decontamination, and contamination control efforts by facility medical staff?</li> <li>• What methods will be used to decontaminate the potentially contaminated victim (once he/she is medically stabilized)?</li> <li>• What contamination control measures are used by the medical facility?</li> <li>• What instruments will be used by the medical facility to monitor the evacuee for contamination? (Manufacturer's Name/Model Number)</li> <li>• What procedures do medical staff (or the ORO) use to ensure that monitoring instruments are operational?</li> <li>• What action level will trigger the need for decontamination of the contaminated evacuee?</li> <li>• What methods will be used to collect and analyze samples including swabs and skin wipes?</li> <li>• Where and by whom will the ambulance crew and ambulance (or other transport vehicle) be monitored and decontaminated if required?</li> </ul>

<b>During the Exercise</b>	<p>During the exercise, in addition to evaluating activities related to the items listed above, be sure to:</p> <ul style="list-style-type: none"><li>• Note what type of vehicle was used for the transportation of the contaminated injured?</li><li>• Note whether medical care took priority over monitoring, decontamination, and contamination control efforts.</li><li>• Note when and by whom the victim was monitored for contamination.</li><li>• Observe and document communications between the medical transport crew and the receiving hospital. Note if accident scene survey records were transferred to the medical facility staff.</li><li>• Determine the knowledge of the medical transport crew concerning where the ambulance (or other transport vehicle) and crew would be monitored and decontaminated.</li><li>• Document contamination control measures taken by the medical transport crew and at the hospital.</li><li>• Document instrumentation used by the medical transport crew and at the hospital. Note whether instruments were operationally checked (if pertinent).</li><li>• Note whether records of all survey measurements and samples taken were kept.</li></ul>
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